

In the Claims:

Please amend Claims 1 and 2 as indicated below. This listing of claims replaces all prior versions.

1. (Currently Amended) A data carrier comprising:

receiving means for receiving a modulated carrier signal

which contains an encoded data signal, said encoded data signal including decoding instruction information;

a power supply capable of generating an operating voltage from the modulated carrier signal;

demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,

decoding means for decoding the encoded data signal and for outputting a data signal,

data processing means for processing the data output by the decoding means and powered by the power supply,

the decoding means including at least a first physical decoding stage and a second physical decoding stage, the first decoding stage being arranged to decode said data signal encoded in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal encoded in conformity with a second decoding method,

and wherein said first decoding method is Manchester (MA) and the second decoding method is Miller; and wherein said decoding means further includes a decision stage capable of determining ~~based on said decoding instruction information~~ which of the first and second decoding stages ~~is suitable to decode~~ decodes the encoded data signal.

2. (Canceled).

3. (Canceled).

4. (Currently Amended) A data carrier comprising:

receiving means for receiving a modulated carrier signal

which contains an encoded data signal, said encoded data signal including decoding instruction information;

a power supply capable of generating an operating voltage from the modulated carrier signal;

demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,

decoding means for decoding the encoded data signal and for outputting a data signal,

data processing means for processing the data output by the decoding means and powered by the power supply,

the decoding means including at least a first physical decoding stage and a second physical decoding stage, the first decoding stage being arranged to decode said data signal encoded in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal encoded in conformity with a second decoding method,

and wherein said first decoding method is Manchester (MA) and the second decoding method is Miller; and wherein said decoding means further includes a decision stage capable of determining based on said decoding instruction information which of the first and second decoding stages is suitable to decode decodes the encoded data signal as claimed in Claim 1, and wherein the decoding stage instruction information includes redundancy data.

5. (Previously Presented) A data carrier as claimed in Claim 1, wherein the decoding means includes a storage stage in which the encoded data signal can be stored prior to being read out by the data processing means.

6. (Canceled).

7. (Previously Presented) A data carrier as claimed in Claim 1, further comprising an encoding means for outputting an encoded data signal, said encoding means including at least a first encoding stage and a second encoding stage.

8. (Previously Presented) A data carrier as claimed in Claim 7, wherein said first encoding stage is designed to encode data in conformity with a third method and said second encoding stage is designed to encode data in conformity with a fourth method which is different from said third method.

9. (Previously Presented) A data carrier as claimed in Claim 1, further comprising modulation means designed to modulate the encoded data signal output.

10. (Currently Amended) A data carrier comprising:

- a receiver designed to receive the modulated carrier signal which includes an encoded data signal;

- a power supply capable of generating an operating voltage from a modulated carrier signal;

- demodulator capable of receiving the modulated carrier signal and designed to output the encoded data signal included therein;

- decoder designed to decode the encoded data signal information and to output data;

- data processor designed to process the output data from the decoder and powered by the power supply; and

- wherein the decoder includes a first decoding stage and a second decoding stage, the first decoding stage designed to decode the encoded data signal which is encoded in conformity with a first encoding method and the second decoding stage designed to decode the encoded data signal encoded in conformity with a second encoding method, wherein said first encoding method is No-Return-To-Zero (NRZ) and second encoding method is Miller, and wherein both the first decoding stage and the second decoding stage attempt to decode the encoded data signal.

11. (Canceled).

12. (Canceled).

13. (Previously Presented) The data carrier of claim 10, wherein the data is output to the data processor before a decision stage determines which of the first and second decoding stages is suitable for decoding the encoded data signal.

14. (Currently Amended) A method comprising:

receiving a modulated carrier signal having an encoded data signal, said encoded data signal including decoding step instructions;
generating an operating voltage from a power supply which receives power from the modulated carrier signal;

demodulating the modulated carrier signal in a demodulator and outputting the encoded data signal contained therein to a decoder;

decoding the encoded data signal and outputting data to a data processor;

processing the data output by the decoder;

wherein the decoding step includes a first decoding stage which decodes the encoded data signal in conformity with a first decoding method and a second decoding stage which decodes the encoded data signal in conformity with a second decoding method, wherein the first decoding method is Manchester (MA) and the second decoding method is Miller; and

wherein the decoding step further includes a decision stage which determines which of the first and second decoding stages is suitable to ~~decode~~decodes the encoded data signal, ~~based on the decoding step instructions.~~

15. (Canceled).

16. (Currently Amended) A method comprising:

receiving a modulated carrier signal having an encoded data signal, said encoded data signal including decoding step instructions;

generating an operating voltage from a power supply which receives power from the modulated carrier signal;

demodulating the modulated carrier signal in a demodulator and outputting the encoded data signal contained therein to a decoder;

decoding the encoded data signal and outputting data to a data processor;

processing the data output by the decoder;

wherein the decoding step includes a first physical decoding stage which decodes the encoded data signal in conformity with a first decoding method and a second physical decoding stage which decodes the encoded data signal in conformity with a second decoding method, wherein the first decoding method is Manchester (MA) and the second decoding method is Miller; and

wherein the decoding step further includes a decision stage which determines which of the first and second decoding stages decodes the encoded data signal, and~~The method of claim 14,~~ wherein the data is output by the first decoding stage to the data processor before the decision stage decides which of the first and second decoding stages is suitable for the decoding of the encoded data signal.

17. (Previously Presented) The method of claim 14, wherein the decision stage evaluates decision supporting information to determine which of the first and second decoding stages is suitable to decode the encoded data signal.

18. (Previously Presented) The method of claim 14, wherein the decoding step further includes a storage stage in which the encoded data signal may be stored prior to the decoding by the first and second decoding stages.

19. (Previously Presented) The method of claim 14, further comprising:

a first encoding stage which encodes data in conformity with a third decoding method; and

a second encoding stage which encodes data in conformity with a fourth decoding method.

20. (Previously Presented) The method of claim 19, wherein the third decoding method is frequency shift keying (FSK) and the fourth decoding method is phase shift keying (PSK).

21. (Currently Amended) A data carrier comprising:

receiving means for receiving a modulated carrier signal which contains an encoded data signal, said encoded data signal including decoding means instruction information;

a power supply capable of generating an operating voltage from the modulated carrier signal;

demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,

decoding means for decoding the encoded data signal and for outputting a data signal,

data processing means for processing the data signal output by the decoding means,

the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while simultaneously the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, and

a decision stage which is arranged to decide which of the first and second decoding stages is suitable to decode said data signal based on the decoding means instruction information.

22. (Currently Amended) A data carrier comprising:

receiving means for receiving a modulated carrier signal which contains an encoded data signal,

a power supply capable of generating an operating voltage from the modulated carrier signal;

demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,

decoding means for decoding the encoded data signal and for outputting a data signal,

data processing means for processing the data signal output by the decoding means,

the decoding means including at least a first physical decoding stage and a second physical decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while in parallel the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, and

a decision stage which is arranged to decide which of the first and second decoding stages ~~is suitable to decode~~ decodes said data signal.

23. (Currently Amended) A data carrier comprising:

receiving means for receiving a modulated carrier signal which contains an encoded data signal,

a power supply capable of generating an operating voltage from the modulated carrier signal;

demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,

decoding means for decoding the encoded data signal and for outputting a data signal,

data processing means for processing the data signal output by the decoding means,

the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while simultaneously the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, wherein said first decoding method is Manchester (MA) and said second decoding method is Miller; and

a decision stage which is arranged to decide which of the first and second decoding stages ~~is suitable to decode~~ decodes said data signal.

24. (Currently Amended) A data carrier comprising:

receiving device capable of receiving a modulated carrier signal which contains an encoded data signal,

a power supply capable of generating an operating voltage from the modulated carrier signal;

demodulation device configured to demodulate the received modulated carrier signal and outputs the encoded data signal contained therein,

decoding device capable of decoding the encoded data signal and outputting a data signal, said decoding device including at least a first decoding stage and a second decoding stage, the first decoding stage is arranged to decode said data signal in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal in conformity with a second decoding method,

a decision stage which determines which of the first and second decoding stages is suitable to decode the encoded data signal, and

data processing device configured to process the data output by the decoding device, wherein once the decision stage applies decision information to the data processing device regarding which of the first and second decoding stages ~~is suitable to decode~~ decodes the encoded data signal, the selected determined first or second decoding stage is used for processing the remainder of the encoded data signal.

25. (Previously Presented) The data carrier of claim 24, wherein the first decoding method is Manchester (MA) and the second decoding method is Miller.

26. (New) A data carrier ~~as comprising~~:

a receiver designed to receive the modulated carrier signal which includes an encoded data signal;

a power supply capable of generating an operating voltage from a modulated carrier signal;

demodulator capable of receiving the modulated carrier signal and designed to output the encoded data signal included therein;

decoder designed to decode the encoded data signal information and to output data;

data processor designed to process the output data from the decoder and powered by the power supply; and

wherein the decoder includes a first decoding stage and a second decoding stage, the first decoding stage designed to decode the encoded data signal which is encoded in conformity with a first encoding method and the second decoding stage designed to decode the encoded data signal encoded in conformity with a second encoding method, wherein said first encoding method is No-Return-To-Zero (NRZ) and second encoding method is Miller, and ~~claimed in Claim 10~~, wherein

said encoded data signal has a structure that ensures that time intervals with high amplitude value of the modulated carrier signal are substantially at least as long as time intervals with low amplitude value of the modulated carrier signal.

27. (Previously Presented) A data carrier as claimed in Claim 1, wherein the power supply is capable of generating the operating voltage by rectifying the modulated carrier signal.

28. (Previously Presented) A data carrier as claimed in Claim 10, wherein the power supply is capable of generating the operating voltage by rectifying the modulated carrier signal.

29. (Previously Presented) The method of claim 14, wherein the power supply rectifies the modulated carrier signal to generate the operating voltage.

30. (Currently Amended) A method comprising:
receiving a modulated carrier signal having an encoded

data signal, said encoded data signal including decoding step instructions;
generating an operating voltage from a power supply which
receives power from the modulated carrier signal;
demodulating the modulated carrier signal in a demodulator
and outputting the encoded data signal contained therein to a decoder;
decoding the encoded data signal and outputting data to a
data processor;
processing the data output by the decoder;
wherein the decoding step includes a first physical decoding stage
which decodes the encoded data signal in conformity with a first decoding method and a
second physical decoding stage which decodes the encoded data signal in conformity
with a second decoding method, wherein the first decoding method is No-Return-To-Zero
(NRZ) and the second decoding method is Miller; and wherein the decoding step further
includes a decision stage which determines which of the first and second decoding stages
~~is suitable to decode~~ decodes the encoded data signal.

31. (Previously Presented) The method of claim 30, wherein the power supply
rectifies the modulated carrier signal to generate the operating voltage.

32. (Currently Amended) A data carrier comprising:
a receiver capable of receiving a modulated carrier signal
which contains an encoded data signal, said encoded data signal including decoding
instruction information;
a power supply capable of generating an operating voltage from the modulated carrier
signal;
demodulator capable of demodulating the received modulated carrier signal and for
outputting the encoded data signal contained therein,
decoder configured to decode the encoded data signal and for outputting a data signal,
data processor capable of processing the data output by the decoding means and powered
by the power supply, the decoder including at least a first physical decoding stage and a
second physical decoding stage, the first decoding stage being arranged to

decode said data signal encoded in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal encoded in conformity with a second decoding method, wherein said first decoding method is Manchester (MA) and the second decoding method is Miller; and wherein said decoder further includes a decision stage capable of determining ~~based on said decoding instruction information~~ which of the first and second decoding stages ~~is suitable to decode~~ decodes the encoded data signal.

33. (Previously Presented) The method of claim 32, wherein the power supply rectifies the modulated carrier signal to generate the operating voltage.